CAR CARE GUIDE

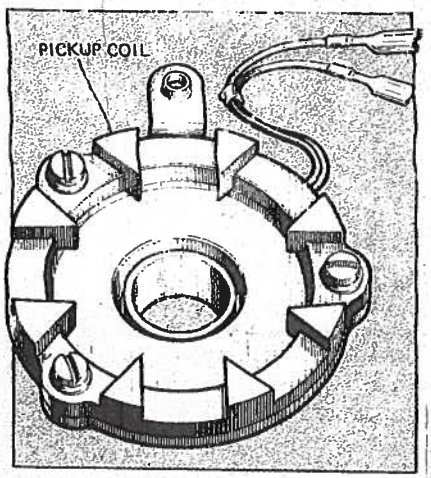
SECTION 9. ENGINE CUT-OUT

"Why Is My Engine Cutting Out?"

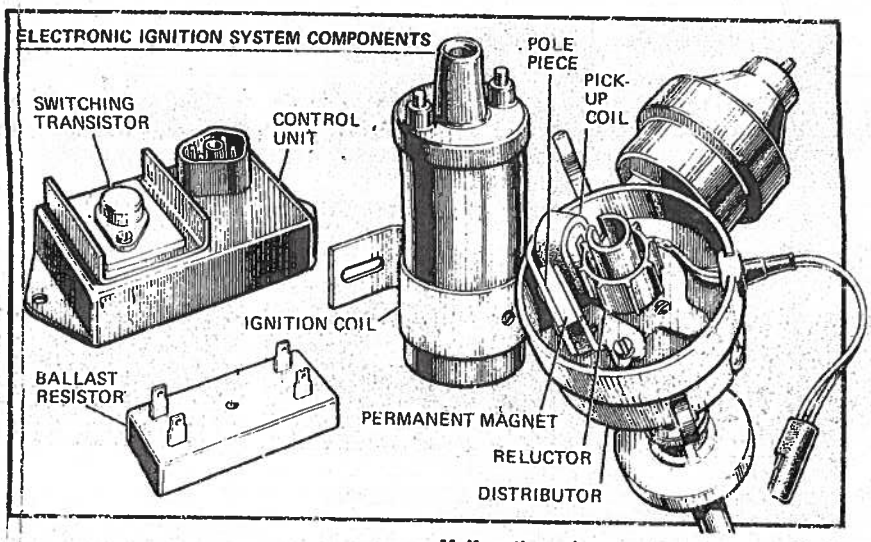
One of the most harrowing experiences you can have is to be driving along, come to a hill, press the accelerator pedal to gain speed and have the engine quit. It restarts, but as soon as you accelerate, the same thing happens. Following one frustrating attempt after another, the engine finally starts and stays started as if a problem never existed. However, a couple of days or weeks later, the trouble strikes again.

The main factor for the increase in occurrences of this problem is oxidation on electronic ignition modules. If you have a GM car with the High Energy Ignition (HEI) system, oxidation buildup may be causing intermittent cutout. In non-HEI systems, when the electronic control unit (ECU) fails, an engine that cuts out cannot usually be started again until the ECU is replaced.

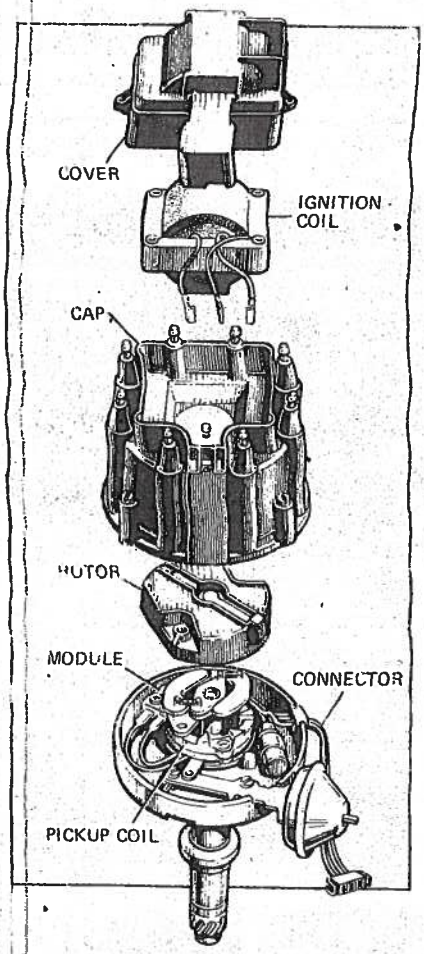
The ECU and HEI modules perform essentially the same function. The ECU, however, is a box separate from the distributor, while the HEI module is a rectangular component inside the distributor.



Pickup coil consists of a permanent magnet with internal teeth. Test with ohmmeter.



Malfunction of one or more of these ignition components can cause the engine to cut out intermittently or just stop dead.



GM's Delco High Energy Ignition (HEI) system has ignition coil built into cap cover.

On several occasions, *Car Clinic* has discussed how you should try to salvage a defective HEI module (the part costs over $60). This information was last presented two months ago, so if you are experiencing cutout in a GM car, turn to *Car Clinic*, page 45, Mar. '82.

Diagnostic procedure

There are several other possible reasons why engines cut out, but the cause is not always easy to find. Follow this approach:

1. Look for damaged and loosely connected ignition wires, bad sparkplug boots and a damaged distributor cap.

2. Check sparkplugs—just in case.

3. *Replace fuel filter* *(see Section 1).*

4. Test fuel pump (see Section 5).

5. Check the ignition coil for intermittent breakdown. *Since the coil doesn't* always show "bad" on a coil tester, except when the trouble is actually occurring, the only *other way to do this is to substitute a coil you* know is good.

6. Test the pickup coil, another part of *an electronic ignition system that can cause* trouble. Use an ohmmeter.

7. Check fuel lines for splits through which air is being drawn.

8. Check inside the distributor for bare or loose wires. A worn distributor shaft may also cause engine cutout. You may have to remove the distributor for inspection.

9. Although fuel tank strainers are made of coarse material that don't usually clog, it's a possibility. Therefore, at this point, drop and open the tank, remove the pickup, replace the strainer and clean the tank before putting it back.

10. Finally, a dirty, damaged carburetor may be the culprit. You may want to overhaul or replace it if it's been in use for many thousands of miles. **PM**